# SERVICE MANUAL

## STEREO TURNTABLE

SANYO

# TP1100UM

### SPECIFICATIONS

| | |
|---|---|
| Type: | Direct Drive Auto Return System |
| Drive System: | Direct Drive |
| Motor: | DC Brushless Motor |
| Speed: | 33-1/3 & 45 rpm. |
| Speed Control Range: | Variable Range ±4% |
| Speed Change: | Electronic Type |
| Wow & Flutter: | Less than 0.04% WRMS |
| Signal to Noise Ratio: | Better than 60dB |
| Turntable Platter: | 12-1/8" (306mm) dia. 3 lbs. 3 ozs. (1.5 kg) |
| Tone Arm: | Static-Balance Type, Auto Return Arm |
| Tracking Error: | ±1.5° |
| Cartridge: | Magnetic Stereo Cartridge |
| Stylus: | 0.5 mil Diamond Stylus |
| Stylus Pressure: | 1.2 – 2.0 g |
| Tracking Force Range: | 0 – 3 g |
| Frequency Range: | 20 – 20,000Hz |
| Channel Separation: | Betterh than 25 dB |
| Power Source: | AC 110/125/220V 50/60Hz |
| Power Consumption: | 12W |
| Dimensions: | 18-3/4"(W) x 6"(H) x 14-15/16"(D) (475 x 152 x 379mm) |
| Weight: | 17 lbs. 10 ozs. |

Specifications and Design are to be change without notice.

## ADJUSTMENTS

1. Adjustment of lifter height
   With the cuing lever set to "UP", adjust the clearance between the disc surface and the stylus tip to approximately 4mm by turning the special screw fastening the tonearm lifter assembly (107C).

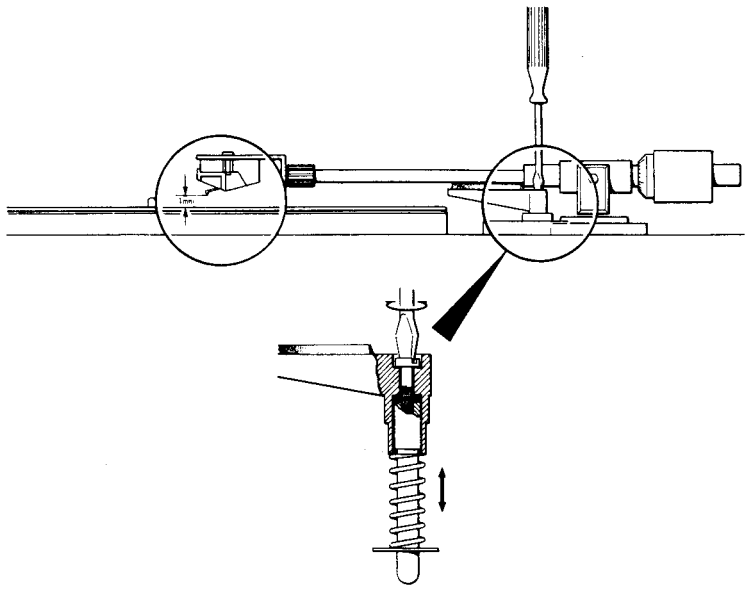


**Fig. 1**

2. Adjustment of Auto-Return
   Make necessary adjustment of the screw (pan head 3 x 8mm) on the tonearm return lever assembly (64) so that the Auto-Return works when the pick-up is 57 to 65mm from the center of the record.

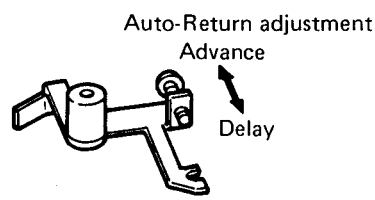



**Fig. 2**

3. Adjustment of height of tonearm rest
   Loosen the screw (3 x 3mm) securing the tonearm rest assembly (107B) and adjust the height of the tonearm rest. Retighten the screw after each adjustment. Be sure that the tonearm does not contact the tonearm lifter with the tonearm lifter assembly (107C) in the "UP" position.

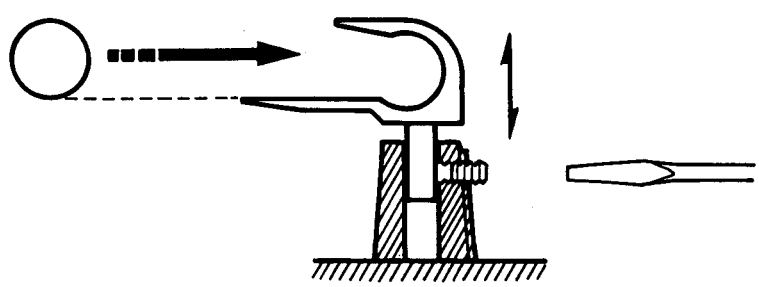


**Fig. 3**

## ADJUSTMENTS

4. Leveling headshell
   If the headshell is inclined either way, loosen the two screws on the tonearm and adjust its position. Retighten the screws securely after leveling.

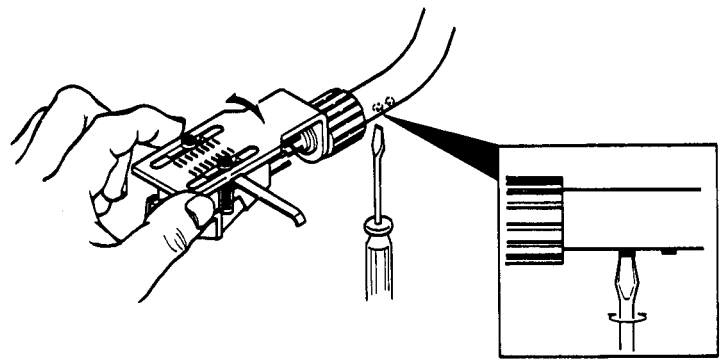


Fig. 4

**Regular lubrication**

Take off the turntable platter and apply two or three drops of oil to the direct-drive motor, which should be lubricated at yearly intervals. Be very careful to keep the levers (52, 53) of the gear assembly (51) from being oiled. If they are, the Auto-Return may fail to work properly.

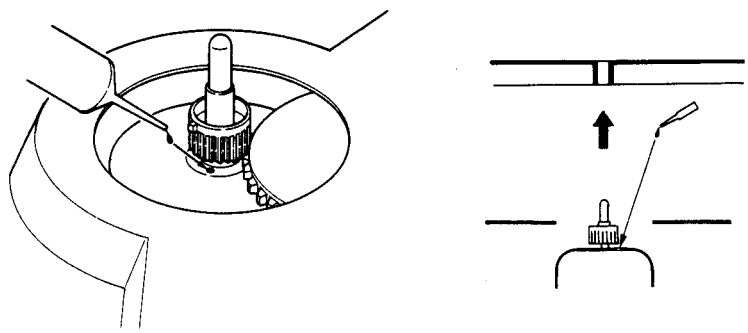


Fig. 5

**Caution**

Don't pull on the output cord when unplugging it, as in B, but hold the plug and pull, as in A.

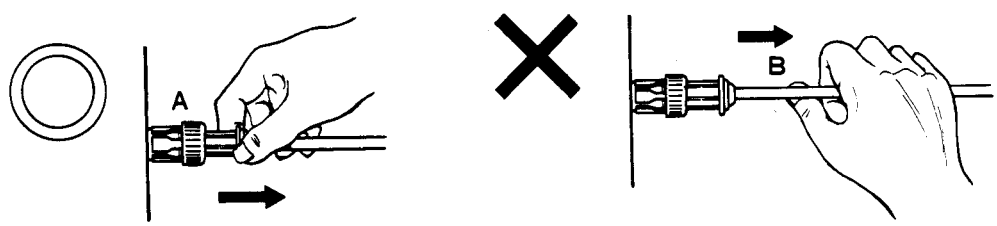
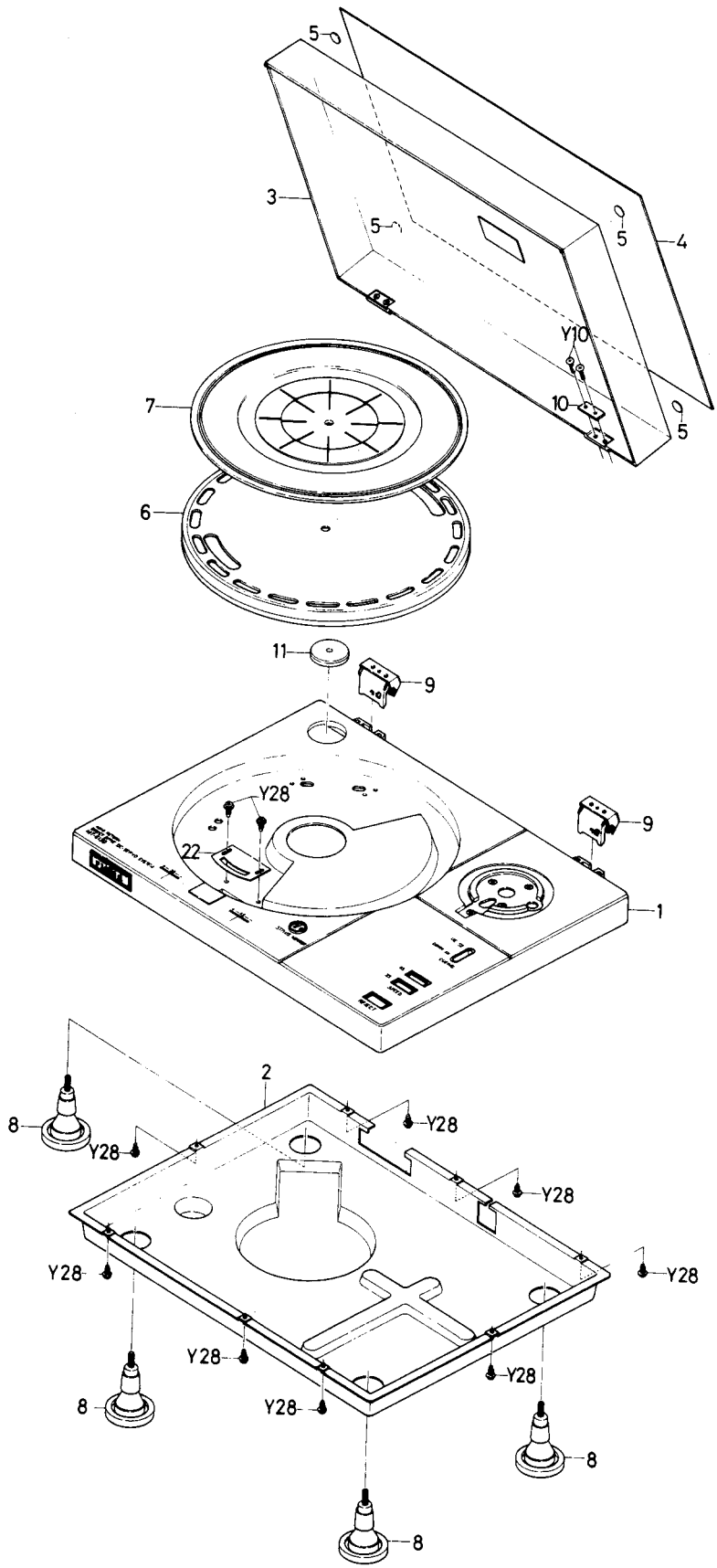



Fig. 6

## EXPLODED VIEW



## PARTS LIST

| Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **PACKING** | | | |
| | 141-6-144T-33600 | Styrol Filler, Right Side | 1 |
| | 141-6-144T-33700 | Styrol Filler, Left Side | 1 |
| | 141-6-316T-73100 | Pad, Bottom | 1 |
| | 141-6-231T-10200 | Inner Polyethylene Bag, Power & Output Cord | 2 |
| | 141-6-231T-10100 | Inner Polyethylene Bag, Cartridge & Main Weight | 2 |
| | 141-6-113T-68703 | Outer Carton | 1 |
| | 141-6-472T-05600 | Caution Label | 1 |
| | 141-6-411T-86900 | Instruction Booklet | 1 |
| | 141-6-231T-25350 | Inner Polyethylene Bag, Printed Matter | 1 |
| | 141-6-231T-90550 | Inner Polyethylene Bag, Set | 1 |
| | 141-6-231T-35400 | Inner Polyethylene Bag, Turn Table & Rubber Sheet | 2 |
| | 141-6-231T-50600 | Inner Polyethylene Bag, Dust Cover | 1 |
| | 141-6-455T-01101 | Serial Number Plate | 2 |
| | 141-6-415T-14600 | Notice, Swedish | 1 |
| | 141-6-415T-06700 | Notice, Power Switch | 1 |
| | 141-6-246T-10300 | Sheet, Dust Cover Protect | 1 |
| | 141-6-316T-73500 | Pad, Dust Cover Protect | 1 |
| **CABINET & TURNTABLE MECHANISM** | | | |
| 1 | 141-0-121T-133913 | Deck Panel Assembly | 1 |
| 2 | 141-2-126T-18600 | Back Lid | 1 |
| 3 | 141-0-194T-005911 | Dust Cover Assembly | 1 |
| 4 | 141-2-246T-09800 | Sheet, Dust Cover Mtg. | 1 |
| 5 | 141-2-289T-01600 | Adhesive Film, Sheet | 4 |
| 6 | 141-2-118T-00300 | Turn Table | 1 |
| 7 | 141-2-246T-08700 | Sheet, Turn Table | 1 |
| 8 | 141-0-174T-00200 | Stand Assembly | 4 |
| 9 | 141-2-251T-06100 | Hinge | 2 |
| 10 | 141-2-351T-37300 | Bracket, Hinge Mtg. | 2 |
| 11 | 141-2-352T-19900 | Spacer, 45 rpm. Adaptor | 1 |
| 12 | 141-2-161T-33800 | Push Button, Speed Selector | 2 |
| 13 | 141-2-352T-21100 | Spacer, Speed Selector (13) Mtg. | 2 |
| 14 | 141-2-361T-11100 | Bracket Resistor, Speed Select Switch Mtg. | 1 |
| 15 | 141-2-445T-05000 | Rubber Cushion, Bracket Resistor (15) Mtg. | 3 |
| 16 | 141-2-421T-13800 | Special Screw, Bracket Resistor (15) Mtg. | 3 |
| 17 | 141-2-161T-33900 | Push Button, Reject Switch | 1 |
| 18 | 141-2-864T-00200 | Bracket, Mirror Mtg. | 1 |
| 19 | 141-2-863T-00200 | Mirror, Bracket (18) Mtg. | 1 |
| 20 | 141-2-328T-04400 | Shield Light, Bracket | 1 |
| 21 | 141-2-445T-18900 | Rubber Cushion, Neon Lamp Mtg. | 1 |
| 22 | 141-2-135T-40400 | Cover, 50/60Hz Select | 1 |
| 23 | 141-2-367T-29600 | Bracket, Power Supply Cord Mtg. | 1 |
| 24 | 141-2-464T-20500 | Fixer, Bracket (23) Mtg. | 1 |
| 25 | 141-2-371T-06801 | Bracket, PT Mtg. | 1 |
| 26 | 141-2-461T-20700 | Pipe, Insert Rubber Cushion (27) | 2 |
| 27 | 123-2-445R-01600 | Rubber Cushion, Bracket Transformer (25) Mtg. | 2 |
| 28 | 141-2-411T-04700 | Plate Nut, PT Mtg. | 2 |
| 29 | 141-2-272T-01000 | Bracket, Output Cord Mtg. | 1 |
| 30 | 141-2-445T-16000 | Rubber Cushion, Bracket (29) | 1 |
| 31 | 141-2-163T-36100 | Rotary Knob, Speed Control | 2 |
| 32 | 141-2-361T-11900 | Bracket, VR Mtg. | 2 |
| 33 | 141-0-741T-958910 | Lever Assembly | 1 |
| 34 | 141-2-741T-95900 | Lever, Arm Lifter | 1 |
| 35 | 141-2-421T-19600 | Special Screw, Lever (34) & Bracket (36) Mtg. | 2 |
| 36 | 141-2-365T-35000 | Bracket, Lever (34) Mtg. | 1 |
| 37 | 141-2-853T-46700 | Plate Spring, Bracket (36) Mtg. | 1 |
| 38 | 141-2-753T-09000 | Shaft, Lever (34) Mtg. | 1 |
| 39 | 141-2-241T-15900 | Veil, Power Supply Switch | 1 |
| 40 | 141-2-753T-12900 | Shaft, Lever (44) Mtg. | 1 |
| 41 | 141-2-747T-14300 | Bracket, Lever (44) Mtg. | 1 |
| 42 | | Rubber Cushion 2.5 x 38 x 1mm, Bracket (36) Mtg. | 1 |
| 43 | 141-2-322T-28202 | Shield Plate, Cartridge Output Terminal Cover | 1 |
| 44 | 141-0-741T-19400 | Lever Assembly, Arm Lifter | 1 |
| 45 | 141-2-472T-01001 | Lug, Lead Retainer | 2 |
| 46 | 141-2-472T-01201 | Lug, Lead Retainer | 6 |

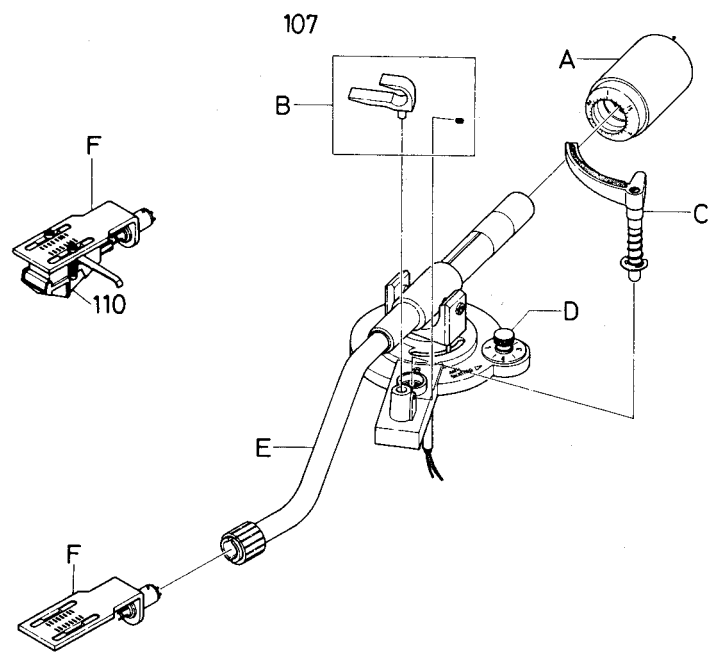
| Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **CABINET & TURNTABLE MECHANISM** | | | |
| 47 | 141-2-464T-14900 | Fixer, Output Cord Retainer | 1 |
| 48 | 141-2-352T-19300 | Spacer, Under the Terminal Board | 1 |
| 49 | 141-2-851T-31500 | Coil Spring | 1 |
| 50 | 141-0-747T-02300 | Bracket Lever Assembly, Gear (51) & Slide (55) Mtg. | 1 |
| 51 | 141-0-581T-00700 | Gear Assembly | 1 |
| 52 | 141-2-741T-97400 | Lever, Gear (51) Mtg. | 1 |
| 53 | 141-0-741T-19600 | Lever Assembly, Gear (51) Mtg. | 1 |
| 54 | 141-0-731T-15300 | Slide Assembly, Main Slide | 1 |
| 55 | 141-2-855T-09000 | Coil Spring, Main Slide (54) Restore | 2 |
| 56 | 141-0-741T-19700 | Lever Assembly, Kick Lever | 1 |
| 57 | 141-2-352T-21700 | Spacer, Micro Switch insulator | 2 |
| 58 | 141-2-747T-14200 | Bracket, Reject Lever Mtg. | 1 |
| 59 | 141-0-741T-19800 | Lever Assembly, Reject Lever | 1 |
| 60 | 141-2-683T-28900 | Ring, Lever (59) Mtg. | 1 |
| 61 | 141-2-852T-37800 | Wire Spring, Kick Lever (56) Mtg. | 1 |
| 62 | 141-2-731T-48400 | Slide, Bracket (58) Mtg. | 1 |
| 63 | 141-2-855T-09200 | Coil Spring, Slide (62) Restore | 1 |
| 64 | 141-0-741T-20100 | Lever Assembly, Micro Switch Operation | 1 |
| 65 | 141-0-741T-20000 | Lever Assembly, Arm Reject Operation | 1 |
| 66 | 141-2-853T-49200 | Plate Spring, Main Slide (54) Mtg. | 1 |
| 67 | 141-2-742T-00700 | Lever, Micro Switch Mtg. | 1 |
| 68 | 141-2-461T-27600 | Pipe, Lever (67) Mtg. | 1 |
| 69 | 141-2-683T-31200 | Ring, Main Slide (54) Mtg. | 1 |
| 70 | | Rubber Cushion 5 x 6 x 8.5mm | 1 |
| 71 | 141-2-421T-20700 | Special Screw, Auto Return Adjustable | 1 |
| 72 | 141-2-851T-58700 | Coil Spring, Lever (64 & 65) Mtg. | 1 |
| 73 | 141-2-851T-48702 | Coil Spring, Lever (67) Restore | 1 |
| 74 | 141-2-315T-13200 | Rainforcement, Lever (67) Mtg. | 1 |
| | 141-6-479T-20500 | Label, Auto Play Caution on the Deck Panel | 1 |
| | 141-6-476T-05700 | Indication Label 400mAT | 1 |
| | 141-2-135T-47600 | Cover, Voltage Select Socket | 1 |
| **ELECTRICAL PARTS** | | | |
| 100 | 4-527T-10000 | Motor | 1 |
| 101 | 4-251T-58300 | Power Transformer | 1 |
| 102 | 4-222T-51500 | Variable Resistor 2kB | 2 |
| 103 | 4-243T-77172 | Power Supply Cord | 1 |
| 104 | 4-231T-42300 | Push Switch, Speed Selector 33/45 rpm. | 1 |
| 105 | 123-2-472R-11201 | Terminal Plate, Cartridge Output Relay | 2 |
| 106 | 4-612T-07000 | Neon Lamp | 1 |
| 107 | 141-0-743T-01271 | Arm Assembly | 1 |
| A | 141-0-687T-00100 | Weight Assembly | (1) |
| B | 141-0-873T-00100 | Rest Assembly | (1) |
| C | 141-0-872T-00100 | Lifter Assembly | (1) |
| D | 141-0-874T-00100 | Inside Force Canceler Assembly | (1) |
| E | 141-0-461T-00200 | Pipe Assembly | (1) |
| F | 141-2-286T-00471 | Head Shell | (1) |
| 108 | 141-2-382T-02000 | Terminal Clip | 1 |
| 109 | 4-243T-13200 | Cord Assembly, Output Cord | 1 |
| 110 | 4-230T-011910 | Printed Circuit Board Assembly | 1 |
| SVR1 2 | 4-222T-39474 | Variable Resistor 5kB | (2) |
| Q1 | | Transistor 2SD325 E | (1) |
| D1 | | Diode DS-18 | (1) |
| D2 | | Diode DS-17 | (1) |
| D3 | | Diode WZ-192 | (1) |
| | | **CAPACITORS** | |
| C4 | | Ceramic 0.01μF +80 −20% 50WV | (1) |
| C2 | | Electrolytic 33μF 25WV | (1) |
| C3 | | Electrolytic 100μF 25WV | (1) |
| C1 | | Electrolytic 330μF 35WV | (1) |
| | | **RESISTORS** | |
| R3 | | Metal Oxide Film 5.6 ohm ±10% 2W | (1) |
| R2 | | Solid 1.2K ohm ±10% 1/2W | (1) |

## PARTS LIST

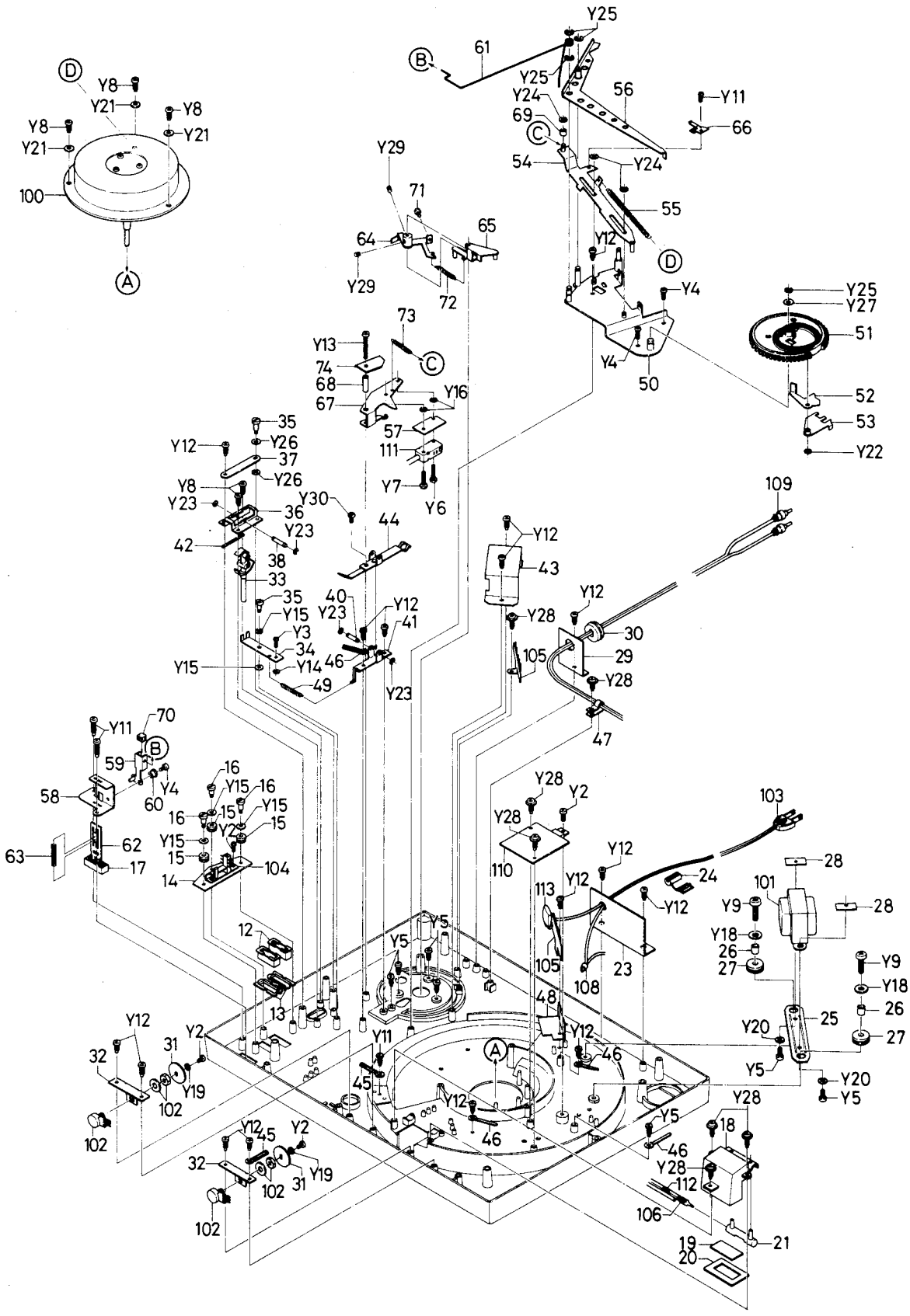
| Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| ELECTRICAL PARTS | | | |
| 111 | 4-231T-61900 | Switch, Mechanism | 1 |
| 112 | | Solid Resistor 10K ohm ±10% 1/2W, Neon Lamp (R1) | 1 |
| 113 | | Mylar Capacitor 0.047μF ±20% 50WV (C5) | 1 |
| | 4-157T-00571 | Cartridge | 1 |
| | 4-237T-06900 | Terminal | 1 |
| | 4-231T-53600 | Switch, Voltage Select | 1 |
| | 4-234T-01700 | Fuse 400mAT | 1 |
| | 141-2-383T-01300 | Fuse Holder | 1 |
| | 4-231T-61972 | Switch, Mechanism | 1 |

| Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| SCREW MOUNTING | | | |
| Y1 | | Pan Head Screw 2 x 4mm | 1 |
| Y2 | | Pan Head Screw 2.6 x 6mm | 2 |
| Y3 | | Pan Head Screw 2.6 x 8mm | 1 |
| Y4 | | Pan Head Screw 3 x 6mm | 3 |
| Y5 | | Pan Head Screw 3 x 8mm | 11 |
| Y6 | | Pan Head Screw 3 x 14mm | 1 |
| Y7 | | Pan Head Screw 3 x 20mm | 1 |
| Y8 | | Pan Head Screw 4 x 8mm | 2 |
| Y9 | | Pan Head Screw 4 x 16mm | 2 |
| Y10 | | Flat Head Screw 4 x 10mm | 2 |
| Y11 | | Tapping Screw 3 x 6mm | 2 |
| Y12 | | Tapping Screw 3 x 8mm | 18 |
| Y13 | | Tapping Screw 3 x 30mm | 1 |
| Y14 | | Nut 2.6mm | 1 |
| Y15 | | Washer 3.2 x 8 x 0.5mm | 3 |
| Y16 | | Washer 3.2 x 8 x 0.8mm | 2 |
| Y17 | | Washer 3.2 x 10 x 1mm | 1 |
| Y18 | | Washer 4.5 x 16 x 1mm | 2 |
| Y19 | | Spring Washer 2.6mm | 2 |
| Y20 | | Spring Washer 3mm | 2 |
| Y21 | | Spring Washer 4mm | 3 |
| Y22 | | External "E" Ring 1.5mm | 1 |
| Y23 | | External "E" Ring 2mm | 4 |
| Y24 | | External "E" Ring 3mm | 3 |
| Y25 | | External "E" Ring 4mm | 4 |
| Y26 | | Graphite Nylon Washer 4.2 x 6.5 x 0.5mm | 2 |
| Y27 | | Graphite Nylon Washer 6 x 10 x 0.5mm | 1 |
| Y28 | | Tapping Screw with Washer 3 x 8mm | 17 |
| Y29 | | Headless with Hexagon Hole Screw 3 x 4mm | 2 |
| Y30 | | Pan Head Screw 2.6 x 4mm | 1 |
| | | Tapping Screw 3 x 16mm | 1 |

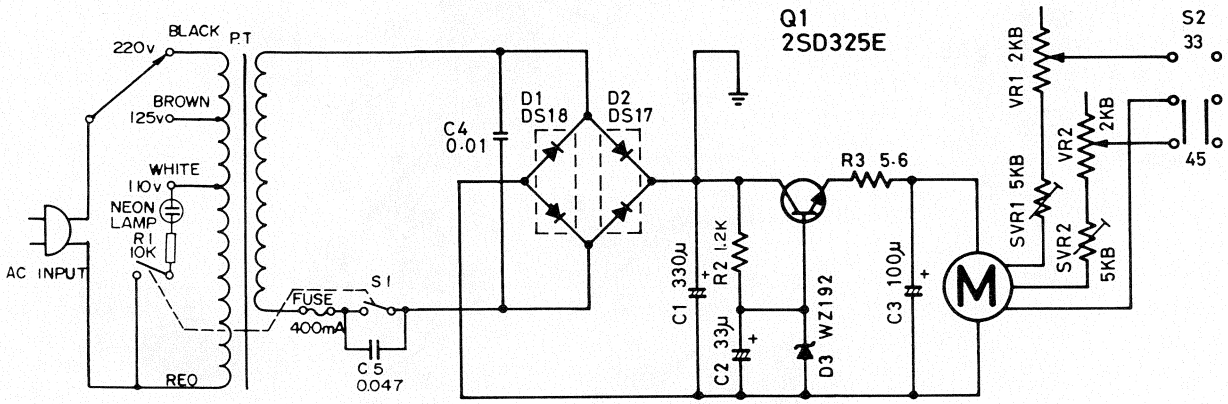
## EXPLODED VIEW



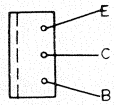
## MECHANISM EXPLODED VIEW



## SCHEMATIC DIAGRAM

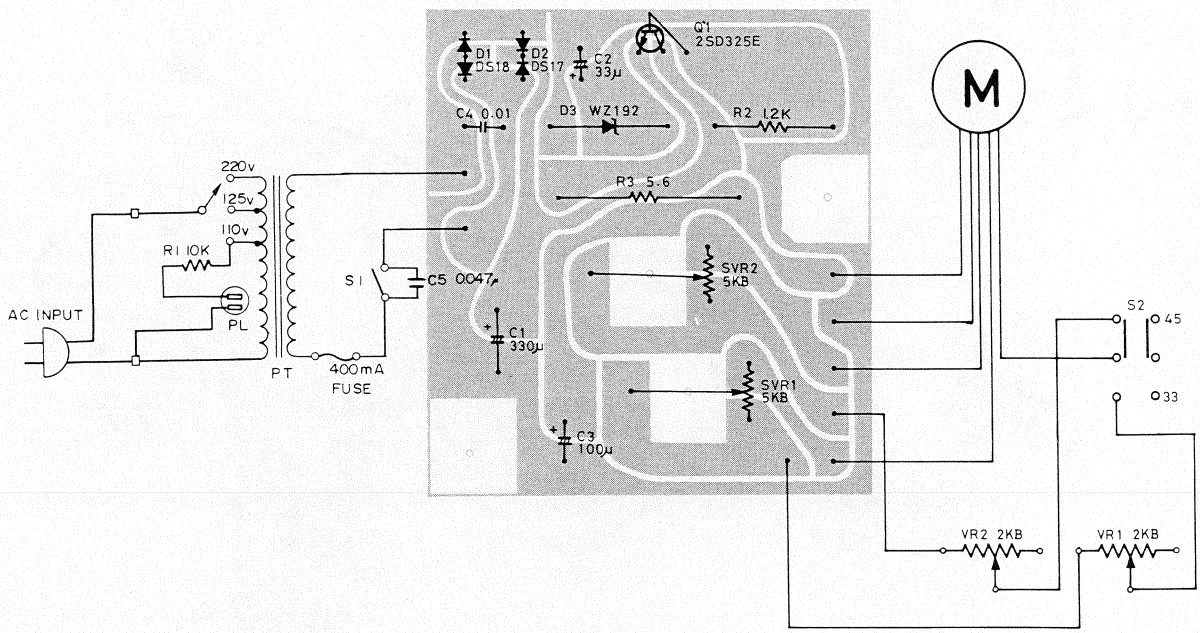



TRANSISTOR CONNECTION




S1····POWER SWITCH
S2····SPEED CHANGE SWITCH

## WIRING DIAGRAM





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Dec./'76/1000 HA Printed in Japan